RED — DC VOLTAGE
BLUE — SIGNAL
BLACK — GROUNDS, SHIELDS AND RETURNS
PURPLE — SIGNAL
GREEN — DATA LINKS

REPRESENTS FEMALE PINS
REPRESENTS MALE PINS
REPRESENTS TWISTED PAIR
REPRESENTS SHIELD

NOTE 1: SOME OF THE CIRCUITS SHOWN HERE WILL NOT BE ACTIVE IN ALL APPLICATIONS. CONSULT THE EQUIPMENT MANUFACTURER'S LITERATURE TO DETERMINE WHICH CIRCUITS ARE USED.

NOTE 2: MAY BE EITHER INCREMENT OR DECREMENT DEPENDING ON THE VALUE OF THE ECM ADJUSTABLE PARAMETER "CRUISE CONTROL SETUP"

NOTE 3: THIS FUSE AMPERAGE IS OEM SPECIFIC

OEM RESPONSIBILITY

CUMMINS RESPONSIBILITY

ELECTRONIC CONTROL MODULE OEM CONNECTOR

ELECTRONIC CONTROL MODULE ENGINE HARNESS CONNECTOR

TELEFLEX MORSE ACCELERATOR PEDAL ASSEMBLY
APS1: 4(C), 6(A), 5(B)
APS2: 3(D), 2(E), 1(F)

WILLIAMS ACCELERATOR PEDAL ASSEMBLY
APS1: C, A, B
APS2: D, F, E

SENSOR 4: 5 VOLT SUPPLY 57, SIGNAL 44, RETURN 56
SENSOR 5: 5 VOLT SUPPLY 42, SIGNAL 43, RETURN 55

REMOTE ACCELERATOR PEDAL OR LEVER ASSEMBLY: 5 VOLT SUPPLY C, SIGNAL B 32, RETURN A
COOLANT LEVEL SENSOR: 5 VOLT SUPPLY A, SIGNAL B 58, RETURN C
EXHAUST BRAKE SWITCH: SIGNAL 13
CLUTCH PEDAL POSITION SWITCH / ENGINE PROTECTION OVERRIDE SWITCH: SIGNAL 39
SERVICE BRAKE POSITION SWITCH: SIGNAL 52
CRUISE CONTROL/PTO RESUME SWITCH: SIGNAL 24
SIGNAL 57
CRUISE CONTROL/PTO SWITCH: SIGNAL 26
ACCELERATOR INTERLOCK SWITCH: SIGNAL 38
DIAGNOSTIC TEST MODE SWITCH: SIGNAL 10
MAXIMUM OPERATING SPEED/GOVERNOR TYPE SWITCH: SIGNAL 25
REMOTE ACCELERATOR PEDAL OR LEVER POSITION SWITCH: SIGNAL 50
REMOTE PTO SWITCH: SIGNAL 12
RETURN 29

TACHOGRAPH: SIGNAL 40
AFTERTREATMENT DIESEL EXHAUST FLUID TANK LEVEL GAUGE: SIGNAL 67
TACHOMETER: SIGNAL 09
EXHAUST BRAKE: SIGNAL 08, RETURN 34
FAN CLUTCH: SIGNAL 33, RETURN
STARTER LOCKOUT/SWITCHED OUTPUT SWITCH: SIGNAL 20, RETURN
GRID HEATER: SIGNAL 46, RETURN 21
AFTERTREATMENT DIESEL EXHAUST FLUID TANK HEATER CONTROL VALVE: SIGNAL 47, RETURN

AIR CONDITIONER ELECTRONIC CONTROL MODULE ENGINE HARNESS CONNECTOR: AIR CONDITIONER REQUEST 27, AIR CONDITIONER COMPRESSOR CONTROL 23
AFTERTREATMENT DIESEL EXHAUST FLUID TANK LEVEL/TEMPERATURE SENSOR: SIGNAL, AFTERTREATMENT DIESEL EXHAUST FLUID TANK LEVEL 19, RETURN, SIGNAL, AFTERTREATMENT DIESEL EXHAUST FLUID TANK TEMPERATURE 31, RETURN

CUMMINS RESPONSIBILITY
AFTERTREATMENT SELECTIVE CATALYTIC REDUCTION INTAKE GAS TEMPERATURE SENSOR: SIGNAL 17, RETURN 30
NOTE 1
AFTERTREATMENT SELECTIVE CATALYTIC REDUCTION OUTLET GAS TEMPERATURE SENSOR: SIGNAL 18, RETURN

DIAGNOSTIC CONNECTOR
SERVICE TOOL CONNECTOR: NOT CONNECTED, NOT CONNECTED, SUPPLY, RETURN, SAE J1939 DATA LINK POSITIVE 14, SAE J1939 DATA LINK NEGATIVE 15, NOT CONNECTED
120 OHM TERMINATION RESISTOR
120 OHM TERMINATION RESISTOR

MAGNETIC/DIGITAL VEHICLE SPEED SENSOR: SIGNAL 28, RETURN, SUPPLY
WAIT TO START LAMP: RETURN 35
RED STOP LAMP: RETURN 49
AMBER WARNING LAMP: RETURN 36
MALFUNCTION INDICATOR LAMP: RETURN 22
FUSE ACCESSORY
IGNITION
5 AMP FUSE
SIGNAL 41
KEYSWITCH
START
BATTERY
1 AMP FUSE
SUPPLY
GROUND TERMINAL
30 AMP FUSE
RETURN 02, RETURN 04, RETURN 06, SUPPLY 01, SUPPLY 03, SUPPLY 05

CUMMINS RESPONSIBILITY
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT CONNECTOR
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT
SUPPLY, AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT
RETURN
SIGNAL, DOSING UNIT SIGNAL / DOSING UNIT TEMPERATURE 31
SIGNAL, AFTERTREATMENT DIESEL EXHAUST FLUID RETURN VALVE 48
RETURN
5 VOLT SUPPLY
SIGNAL, AFTERTREATMENT DIESEL EXHAUST FLUID PRESSURE 45
SUPPLY
RETURN

AFTERTREATMENT DIESEL EXHAUST FLUID LINE HEATER 1: SIGNAL, RETURN
AFTERTREATMENT DIESEL EXHAUST FLUID LINE HEATER 2: SIGNAL, RETURN
AFTERTREATMENT DIESEL EXHAUST FLUID LINE HEATER 3: SIGNAL, RETURN
AFTERTREATMENT DIESEL EXHAUST FLUID LINE HEATER RELAY
15 AMP FUSE
87A, 30, 87, 85, 86
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT HEATER RELAY
15 AMP FUSE
87A, 30, 87, 85, 86

AFTERTREATMENT DIESEL EXHAUST FLUID DOSING VALVE: SIGNAL, RETURN
AFTERTREATMENT OUTLET NOX SENSOR RELAY
15 AMP FUSE
87A, 30, 87, 85, 86
120 OHM TERMINATION RESISTOR
AFTERTREATMENT OUTLET NOX SENSOR: POSITIVE, NEGATIVE, RETURN, SUPPLY

20 PIN CROSSOVER CONNECTOR
SIGNAL 13 — SIGNAL
RETURN 15 — RETURN
SIGNAL 06 — SIGNAL
SIGNAL 02 — SIGNAL
RETURN — RETURN
SUPPLY 14 — SUPPLY
RETURN 04 — RETURN
SIGNAL 07 — SIGNAL
RETURN 11 — RETURN
POSITIVE 10 — SAE J1939 DATA LINK POSITIVE
NEGATIVE 09 — SAE J1939 DATA LINK NEGATIVE

14 PIN CROSSOVER CONNECTOR
SUPPLY 10 — SUPPLY
RETURN 05 — RETURN
SIGNAL 12 — SIGNAL
SIGNAL 03 — SIGNAL
RETURN 01 — RETURN
SIGNAL 11 — SIGNAL
RETURN 09 — RETURN
SIGNAL 04 — SIGNAL
RETURN 07 — RETURN
POSITIVE 14 — SAE J1939 DATA LINK POSITIVE
NEGATIVE 13 — SAE J1939 DATA LINK NEGATIVE

CRANKSHAFT POSITION SENSOR: SIGNAL 38, RETURN 14, 5 VOLT SUPPLY — SENSOR SUPPLY 3 13
CAMSHAFT POSITION SENSOR: SIGNAL 62, RETURN 63, 5 VOLT SUPPLY — SENSOR SUPPLY 1 87
FUEL RAIL PRESSURE SENSOR: 5 VOLT SUPPLY — SENSOR SUPPLY 1 92, SIGNAL 69, RETURN 68
INTAKE MANIFOLD TEMPERATURE/PRESSURE SENSOR: RETURN 65, SIGNAL 23, 5 VOLT SUPPLY — SENSOR SUPPLY 1 89, SIGNAL 70
BAROMETRIC AIR PRESSURE SENSOR: SIGNAL 72, RETURN 64, 5 VOLT SUPPLY — SENSOR SUPPLY 1 88
ENGINE COOLANT TEMPERATURE SENSOR: SIGNAL 46, RETURN 43
WATER IN FUEL SENSOR: RETURN 44, SIGNAL 47
OIL PRESSURE SWITCH: SIGNAL 37
FUEL PUMP ACTUATOR: RETURN 31, SIGNAL 32
120 OHM TERMINATION RESISTOR AND DIAGNOSTIC CONNECTOR CONNECTOR: SAE J1939 DATA LINK NEGATIVE 16, SAE J1939 DATA LINK POSITIVE 15
REAL TIME CLOCK BACKUP BATTERY: SIGNAL 11, RETURN 10
COMPRESSOR INTAKE TEMPERATURE SENSOR: SIGNAL 48, RETURN 19

INJECTOR SOLENOID DRIVER CYLINDER 1: SIGNAL 50, RETURN 49
INJECTOR SOLENOID DRIVER CYLINDER 2: SIGNAL 02, RETURN 26
INJECTOR SOLENOID DRIVER CYLINDER 3: SIGNAL 01, RETURN 25
INJECTOR SOLENOID DRIVER CYLINDER 4: SIGNAL 74, RETURN 73

SIGNAL — AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT HEATER RELAY 05
RETURN — AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT HEATER RELAY 29
SIGNAL — AFTERTREATMENT DIESEL EXHAUST FLUID RETURN VALVE 56
SIGNAL — AFTERTREATMENT DIESEL EXHAUST FLUID LINE HEATER RELAY 08
RETURN — AFTERTREATMENT DIESEL EXHAUST FLUID LINE HEATER RELAY 79
SUPPLY — AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT 60
RETURN — AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT 55
SIGNAL — AFTERTREATMENT DIESEL EXHAUST FLUID DOSING VALVE 77
RETURN — AFTERTREATMENT DIESEL EXHAUST FLUID DOSING VALVE 53

14 PIN CROSSOVER CONNECTOR
SUPPLY — AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT 05
RETURN — AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT HEATER RELAY 29
SIGNAL — AFTERTREATMENT DIESEL EXHAUST FLUID RETURN VALVE 56
SIGNAL — AFTERTREATMENT DIESEL EXHAUST FLUID LINE HEATER RELAY 08
RETURN — AFTERTREATMENT DIESEL EXHAUST FLUID LINE HEATER RELAY 79
SIGNAL — AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT HEATER RELAY 80
RETURN — AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT 55
SIGNAL — AFTERTREATMENT DIESEL EXHAUST FLUID DOSING VALVE 77
RETURN — AFTERTREATMENT DIESEL EXHAUST FLUID DOSING VALVE 53

ELECTRONIC CONTROL MODULE
OEM CONNECTOR — ENGINE CONNECTOR

ELECTRONIC CONTROL MODULE ENGINE HARNESS CONNECTOR MATING FACE
ELECTRONIC CONTROL MODULE OEM CONNECTOR MATING FACE
AFTERTREATMENT DIESEL EXHAUST FLUID CONTROLLER CONNECTOR MATING FACE
AFTERTREATMENT DIESEL EXHAUST FLUID CONTROLLER CONNECTOR MATING FACE

OIL PRESSURE SWITCH AND AFTERTREATMENT TEMPERATURE SENSORS CONNECTOR MATING FACE
COMPRESSOR INTAKE TEMPERATURE SENSOR CONNECTOR MATING FACE
FUEL RAIL PRESSURE SENSOR CONNECTOR MATING FACE
INJECTOR PASS THROUGH CONNECTOR
WATER IN FUEL SENSOR CONNECTOR MATING FACE
INTAKE MANIFOLD AIR PRESSURE/TEMPERATURE SENSOR CONNECTOR MATING FACE
BAROMETRIC AIR PRESSURE SENSOR CRANKSHAFT POSITION SENSOR CAMSHAFT POSITION SENSOR CONNECTOR MATING FACE
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING VALVE CONNECTOR MATING FACE
COOLANT TEMPERATURE SENSOR CONNECTOR MATING FACE
FUEL PUMP ACTUATOR CONNECTOR MATING FACE
AFTERTREATMENT OUTLET NOX SENSOR CONNECTOR MATING FACE
AFTERTREATMENT DIESEL EXHAUST FLUID TANK LEVEL/TEMPERATURE SENSOR CONNECTOR MATING FACE
120 OHM TERMINATION RESISTOR AND DIAGNOSTIC CONNECTOR CONNECTOR MATING FACE
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT CONNECTOR MATING FACE

Cummins Inc.

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